PSG COLLEGE OF ARTS *&* SCIENCE
(AUTONOMOUS)
BSc DEGREE EXAMINATION DECEMBER 2018
(Third Semester)

Branch - **ELECTRONICS**

DIGITAL PRINCIPLES & APPLICATIONS

Time : Three Hours   Maximum : 75 Marks

SECTION-A (20 Marks)
Answer **ALL** questions
ALL questions carry **EQUAL** marks   (1 0 x 2 = 20)

1   What is meant by Binary?
2   What do you mean by ASCII code?
3   State De-morgan's theorem.
4   Expand SOP, POS.
5   Write the inputs and outputs of Half Adder.
6   What is meant by Encoder?
7   List out the types of Shift Registers.
8   Give the types of Counter.
9   What is the use of D/A converters?
10   What is the advantage of mean by successive Approximation method?

SECTION - B *(25* Marks)
Answer **ALL** Questions
ALL Questions Carry **EQUAL** Marks (5 x 5 = 25)

11 a Compare the Digital & Analog.
> OR

b Explain the operation of EBCDIC.

12 a Describe the operation of commutative, Associative Law with its examples.
> OR

b Elucidate the principles of Don't care conditions.

13 a Write the principles of l's and 2's complement with its example.
> OR

b Give the function of Multiplexer with neat diagram.

14 a Show the working of RS Flip flop with necessary diagram.
> OR

b Discuss about the Synchronous counter with neat diagram.

15 a Explain the operation of weighted resistor method of DAC with its
        Accuracy & Resolution.
> OR

b   Describe the working of simultaneous conversion of A/D converter with neat sketch

SECTION - C (30 Marks!
Answer any **THREE** Questions
ALL Questions Carry **EQUAL** Marks (3 x 10 = 30)

16   Explain the following terms
          (i) Octal (2V2 marks)   (ii) Hexa-decimal *(2Vi* marks)
          (iii) Gray code (2'/$_2$ marks) (iv) Excess-3 code *(2¹A* marks)

17   What is meant by Universal gates? Describe the operation of Universal gates.

18   Distinguish between Demultiplexer & Decoder.

19   Elucidate the working of serial in serial out register with neat diagram.

20   What do you mean Binary Ladder? Explain the function of Binary Ladder
          with its Accuracy and Resolution.